UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,667	04/13/2004	Vincenzo Sestito	Q80624	7768

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EXAMINER
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ART UNIT	PAPER NUMBER
2609	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/822,667	SESTITO ET AL.
	Examiner	Art Unit	
	Ramtin Kangarloo	2609	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-19* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *13 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *4/13/2004*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or
> composition of matter, or any new and useful improvement thereof, may obtain a patent
> therefor, subject to the conditions and requirements of this title.

Claim 18 is rejected under 35 U.S.C. 101 because *the claimed invention is*

directed to non-statutory subject matter.

Claim 18 is directed to a computer program, but it fails to include a

computer readable media as part of the computer program product. Such

claimed computer program does not define any structural and functional

interrelationships between the computer program and other claimed elements of

a computer, which permit the computer program's functionality to be realized.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

3.   This application currently names joint inventors. In considering

patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that

the subject matter of the various claims was commonly owned at the time any

inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

and invention dates of each claim that was not commonly owned at the time a

later invention was made in order for the examiner to consider the applicability of

35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35

U.S.C. 103(a).

4.   Claims 1-3, 6-15, and 17-19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Phelps (US Patent Application Publication No.2005/0088963)

in view of Masanori (JP 07177114).

Regarding **Claim 1**, Phelps disclose a method for enhancing a trail/path

protection function in a SDH/SONET network, the network comprising a number

of working resources and a number of protection resources and transmitting

signal frames having a section overhead in SDH technology, or a Line Overhead

in SONET technology, and a POH, said protection function comprising linear

MSP N:1 trail protection function (see Page. 1, Paragraph [0005]). Phelps does

not specifically disclose protection function based on transmission of protection

information through K1 and K2 bytes of Section Overhead or Line Overhead.

Masanori teaches protection function based on transmission of protection

information through K1 and K2 bytes of Section Overhead in SDH or Line

Overhead in SONET wherein the method further comprises the step of mapping

the content of said K1 and K2 bytes by protocol exchange into POH bytes of the

path overhead in SDH or SONET, at Low Order and/or High Order level, so as

to allow the handling of more than one protecting resource shared among

different working resources, both in end-to-end handling and in intermediate

handling (see Page. 1, Paragraph [0002]).

Thus, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to mount the transmission of protection

information taught by Masanori onto the protection function shown in Phelps, in

order to control the traffic base on priority so that the systems become more

effective.

Regarding **Claim 2**, Phelps and Masanori disclose the limitations in claim

1. Furthermore, Masanori teaches a protection function, wherein the step of

mapping the content of said K1 and K2 bytes into POH bytes comprises

mapping into K3 byte at high order level and into K4 byte at low order level for

SDH technology (see Page. 2, Paragraph [0010]).

Thus, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to mount the mapping base on priority taught by

Masanori onto the protection function shown in Phelps, in order to control the

traffic so that the systems run more efficient.

Regarding **Claim 3,** Phelps and Masanori disclose the limitations in claim

1. Furthermore, Masanori teaches a protection function, wherein the step of

mapping the content of said K1 and K2 bytes into POH bytes comprises

mapping into Z4 byte at high order level and into Z7 byte at low order level for

SONET technology (see Page. 3, Paragraph [0020]).

Thus, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to mount the mapping base on priority taught

by Masanori onto the protection function shown in Phelps, in order to control the

traffic so that the systems run more efficient.

Regarding **Claim 6,** Phelps and Masanori disclose the limitations in claim

1. Furthermore, Phelps discloses a protection function wherein, in case of failure

of one of the working resources, a check step is performed for checking whether

at least one of the protection resources is available, namely in the idle state (see

Page. 6, Paragraph [0055]).

Regarding **Claim 7,** Phelps and Masanori disclose the limitations in claim

1 and 6. Furthermore, Phelps discloses the check step is performed by

assigning a number to each one of the protection resources and scanning,

either in increasing or in decreasing order, the protection resources (see Page.

1, Paragraph [0010]).

Regarding **Claim 8,** Phelps and Masanori disclose the limitations in claim

1and 6. Furthermore, Phelps discloses case of positive check, switch criterion is

taken into account by APS controller as a valid input, a consistent Bridge

Request is issued and actions required by the new switch criterion are

performed by using the available protection resource, regardless the priority level of Bridge Requests already served (see Page. 8, Paragraph [0073]).

Regarding **Claim 9,** Phelps and Masanori disclose the limitations in claim 1and 6. Furthermore, Phelps discloses, in case of negative check, the priority level of Bridge Requests currently served is checked and compared with priority of the new switch criterion (see Page. 8, Paragraph [0073]).

Regarding **Claim 10**, Phelps and Masanori disclose the limitations in claim 1, 6 and 9. Furthermore, Phelps discloses the priority level wherein if priority of new switch criterion is higher than at least one of the Bridge Requests currently served, then, the lowest priority request is pre-empted by the request associated to the new switch criterion and the actions required are performed by using the protection resource previously used by preempted Bridge Request (see Page. 8, Paragraph [0073]).

Regarding **Claim 11**, Phelps and Masanori disclose the limitations in claim 1,6 and 9. Furthermore, Phelps discloses the priority level, wherein if the priority of new switch criterion is lower than or equal to Bridge Requests currently served, then, the new switch criterion is not considered as a valid input for APS controller and not signaled through protocol bytes; if new switch criterion is a command, it is dropped, namely it is not kept in pending status (see Page. 8, Paragraph [0073]).

Regarding **Claim 12**, Phelps and Masanori disclose the limitations in claim

1 and 6. Furthermore, Phelps discloses, when more switch initiation criteria are

simultaneously detected, the highest priority level request will be served as first;

if the switch initiation criteria are at the same priority level it is proposed that the

one referring to the lowest Traffic Number will be served first (see Page. 1,

Paragraph [0008]).

Regarding **Claim 13,** Phelps and Masanori disclose the limitations in claim

1 and 6. Furthermore, Phelps discloses, when more Signal Failure/Signal

Degrade conditions are present within a protection group and not served, due to

the lack of available protection resources, the highest priority condition is served

first as soon as one protection resource becomes available (see Page. 1,

Paragraph [0008]).

Regarding **Claim 14,** Phelps and Masanori disclose the limitations in claim

1 and 6. Furthermore, Phelps discloses, when more protecting resources are in

a Wait Time to Restore condition and no other protection resource is available, a

new Bridge Request, will override WTR state on the protection resource having

lowest, or highest, number (see Page. 6, Paragraph [0058]).

Regarding **Claim 15,** Phelps disclose a network element for a SDH or

SONET network comprising at least two network elements and wherein an

enhanced trail/path protection function is implemented, the network comprising

a number of working resources and a number of protection resources and

transmitting signal frames having a section overhead in SDH technology, or a

Line Overhead in SONET technology, and a POH, said protection function

comprising linear MSP N:1 trail protection function (see Page. 1, Paragraph

[0005]). Phelps does not specifically disclose protection function based on

transmission of protection information through K1 and K2 bytes of Section

Overhead or Line Overhead. Masanori teaches protection function based on

transmission of protection information through K1 and K2 bytes of Section

Overhead in SDH or Line Overhead in SONET, wherein it comprises a device

for mapping or de-mapping the content of said K1 and K2 bytes by protocol

exchange into POH bytes of the path overhead in SDH or SONET, at Low Order

and/or High Order level, so as to allow the handling of more than one protecting

resource shared among different working resources, both in end-to-end handling

and in intermediate handling (see Page. 1, Paragraph [0002]).

Thus, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to mount the transmission of protection

information taught by Masanori onto the protection function shown in Phelps, in

order to control the traffic base on priority so that the systems run more efficient.

Regarding **Claim 17,** Phelps and Masanori disclose the limitations in claim

15. Phelps and Masanori do not specifically teach using groups of two bits.

However, it would have been obvious to one having ordinary skill in the art at

the time the invention was made that one would use different multi-frames

structures including four groups of two according to the desired system

specifications setup by the manufacturer or desired by the end user. Different

groupings of bits provide faster processing and also it helps to handle traffic with

different priority.

Regarding **claim 18 and 19,** all of the limitations as apply to claim 1 are

taught by Phelps and Masanori. In addition, it would have been obvious to one

of ordinary skill in the art at the time the invention was made to perform the

method taught as a computer program recorded on computer readable media.

5.   Claims 4, 5 and 16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Phelps (US Patent Application Publication No.2005/0088963)

in view of Masanori (JP 07177114) as applied to claim 1, 2 and 15 above, and

further in view of Daniell (US Patent Application Publication No.2003/0185149).

Regarding **Claim 4**, Phelps and Masanori disclose the limitation in claim 1

and 2. Phelps and Masanori do not specifically disclose mapping. Daniell

teaches the step of mapping the content of said K1 and K2 bytes into POH

bytes comprises providing a four-bit based multiframe (see Page. 2, Paragraph

[0024]).

Thus, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to mount the step of mapping taught by Daniell

onto the protection function shown in the system of Phelps and Masanori, in order to control the traffic base on priority so that the systems run more efficient.

Regarding **Claim 5**, Phelps and Masanori disclose the limitations in claim 1 and 2. Phelps and Masanori do not specifically disclose mapping. Daniell teaches the step of mapping the content of said K1 and K2 bytes into POH bytes comprises providing a two-bit based multiframe (see Page. 2, Paragraph [0024]).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the step of mapping taught by Daniell onto the protection function shown in the system of Phelps and Masanori, in order to control the traffic base on priority so that the systems run more efficient.

Regarding **Claim 16,** Phelps and Masanori disclose the limitations in claim 15. Phelps and Masanori do not specifically disclose mapping. Daniell teaches a device for mapping or de-mapping is capable of mapping or demapping, respectively, a four-bits based multiframe whose payload comprises the first four bits of byte K1, the second four bits of byte K1 and the first four bits of byte K2 (see Page. 2, Paragraph [0024]).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the mapping or de-mapping taught by Daniell onto the protection function shown in the system of Phelps and Masanori,

in order to control the traffic base on priority so that the systems run more

efficient.

Conclusion

6.   Any response to this Office Action should be **faxed** to (571) 273-8300 **or**

Mailed

to :

Commissioner for Patents,

P.O.Box 1450

Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window

Randolph Building

401 Dulany Street

Alexandria, VA 22314

7.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Ramtin Kangarloo whose telephone number

is (571) 270-3452. The examiner can normally be reached on Monday to

Thursday 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Benny Tieu can be reached on (571) 272-7490. The fax

phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

PAIR. Status information for unpublished applications is available through

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Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

Ramtin Kangarloo
Examiner Art Unit 2609
August 13, 2007

BENNY Q. TIEU
SPE/TRAINER